CLOSED IMPELLER - GIRANTE CHIUSA

CS

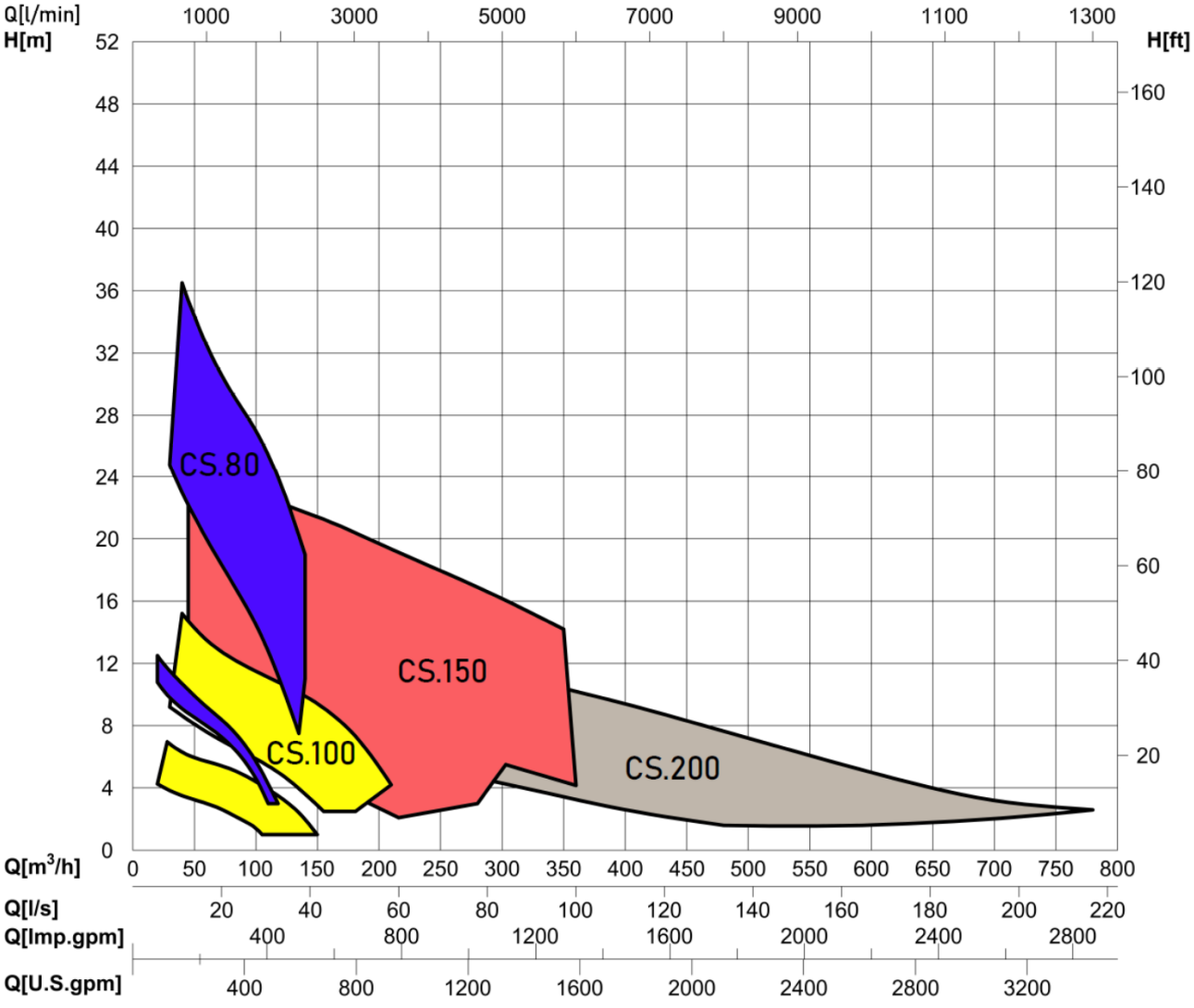


SUBMERSIBLE
PUMPS FOR DIRTY WATERS

with closed impeller [CS] suitable for sludge
and waste waters with suspended solids

POMPE
SOMMERGIBILI PER ACQUE SPORCHE

con girante chiusa [CS] idonea per fanghi
e acque di scarico con solidi sospesi



CLOSED IMPELLER - GIRANTE CHIUSA CS

EN

Submersible pumps with closed impeller (single channel or three channels). Hydraulic solution that guarantees a good free passage of solids reducing the risk of blocking and clogging of the impeller.
Very suitable to pump sewage in the waste waster treatment sites.

IT

Elettropompe sommergibili con girante chiusa (monocanale o tre canali) . Soluzione idraulica che garantisce un discreto passaggio libero di corpi solidi, riducendo il pericolo di blocco della girante ed intasamento del corpo pompa.
Molto indicata per il pompaggio di reflui negli impianti di depurazione

1 Cast Iron G25 Motor Body.
Corpo motore in ghisa GG25.

2 Stator (3 ~ Class H).
Statore avvolto (3 ~ in classe H).

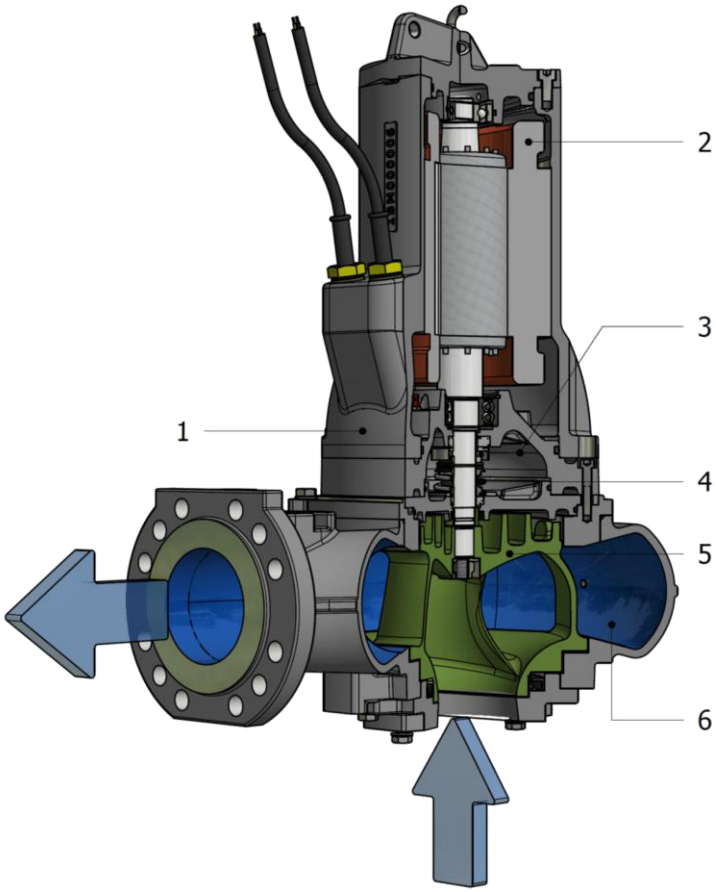
3 Oil Chamber - Cooling and lubrication of the mechanical seals.

Camera olio - raffreddamento e lubrificazione delle tenute meccaniche.

4 Mechanical seals.
Tenute meccaniche.

5 Closed mpeller.
Girante chiusa .

6 GG25 Cast iron body pump.
Corpo Pompa in ghisa GG25.



Area of use / Settori d'impiego

- Waste water treatment - civil / industrial plants
  Trattamento delle acque di scarico - impianti civili / industriali.

- Drainage and lifting in domestic and residential systems.
  Drenaggio e sollevamento in impianti domestici e residenziali.

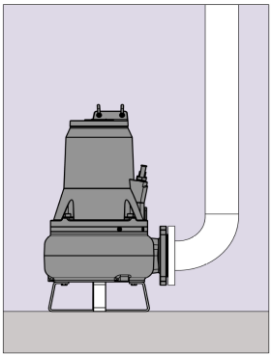
Applications / Applicazioni

- Water and sludge from civil, industrial and domestic waste.
  Acque e fanghi provenienti da scarichi civili, industriali e domestici.

- Drainage, rainwater and process water.
  Acque di drenaggio, piovane e di processo.

Types of installation - Tipi di installazione

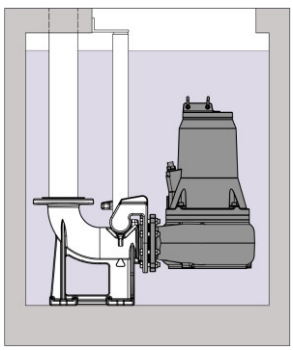
S Transportable underwater
Trasportabile in immersione



- Versatile solution suitable for various uses. A hose connection or connection flange is required for the rigid discharge line. The pump must be placed on a support stand.

- Soluzione versatile adatta a diversi impieghi.
E' necessario un attacco per tubo flessibile o flangia di collegamento per la tubazione premente rigida. La pompa va posizioata su un cavalletto di sostegno.

FC Fixed submersible with coupling device
Fissa in immersione con dispositivodi accoppiamento



- Automatic positioning system of the pump inside the tank connected to the discharge pipe. The pump is lowered or extracted with a lifting chain; the pump slides along two guide rails until it engages with the foot coupling.
- Sistema di posizionamento automatico della pompa all'interno della vasca collegato alla tubazione premente. La pompa viene calata o estratta con catena di sollevamento; scorre lungo due tubi guida fino ad agganciarsi al piede di accoppiamento.

SUBMERSIBLE PUMPS
POMPE SOMMERGIBILI

CS.100

CS.100_[GM.173] series

THREE-PHASE MOTORS 3~

CS.100_11.6T_[GM.173]	- 6 poles	- 1,1 kW
CS.100_15.6T_[GM.173]	- 6 poles	- 1,5 kW
CS.100_17.6T_[GM.173]	- 6 poles	- 1,7 kW
CS.100_25.4T_[GM.173]	- 4 poles	- 2,5 kW
CS.100_35.4T_[GM.173]	- 4 poles	- 3,5 kW
CS.100_45.4T_[GM.173]	- 4 poles	- 4,5 kW
CS.100_52.4T_[GM.173]	- 4 poles	- 5,2 kW



CS.100_[GM.173]

- Submersible pumps with single channel closed impeller, compact and robust construction.
- Cast iron construction; base treatment with water-based acrylic primer and final finishing with water-based paint (30µm). Special coating with two-component epoxy resistant to abrasion on request (80µm).

- Pompe sommergibili con girante chiusa monocanale, compatte e di robusta costruzione.
- Costruzione in ghisa; trattamento di fondo con primer acrilico a base d'acqua e rifinitura finale con vernice a base d'acqua (30µm). Rivestimento speciale con bicomponente epossidico resistente all'abrasione (80µm) su richiesta.

- Pompes submersibles avec roue monocanal, construction compacte et robuste.
- Construction en fonte ; traitement de base avec apprêt acrylique à base d'eau et finition finale avec peinture à base d'eau (30µ Revêtement spécial avec époxy bi-composant résistant à l'abrasion (80µm) sur demande.

- Bombas sumergibles con impulsor monocanal, construcción compacta y robusta.
- Construcción de hierro fundido; tratamiento base con imprimación acrílica al agua y acabado final con barniz al agua (30µ Revestimiento especial con epoxi bicomponente (80µm) resistente a la abrasión, bajo pedido.

OPERATING LIMITS - LIMITI DI UTILIZZO

- Tmax = 40 °C standard product
  Tmax = 70 °C special version
  6 ≤ PH ≤12
  Chloride content < 200 mg/l
  Abrasive solid content < 1mg/l
  Density ~ 1 kg/dm^3
  Viscosity ~ 1 mm^2/s;

- Tmax = 40 °C prodotto standard
  Tmax = 70 °C versioni speciali
  6 ≤ PH ≤12
  Contenuto cloruri < 200 mg/l
  Contenuto solidi abrasivi < 1mg/l
  Densità ~ 1kg/dm^3
  Viscosità ~ 1mm^2/s;

- Tmax = 40 °C produit standard
  Tmax = 70 °C versions spéciales
  6 ≤ PH ≤12
  Teneur en chlorurec< 200 mg/l
  Teneur en solides abrasifs < 1mg/l
  Densité ~ 1kg/dm^3
  Viscosité ~ 1mm^2/s;

- Tmax = 40 °C producto estándar
  Tmax = 70 °C versiones especiales
  6 ≤ PH ≤12
  Contenido de cloruro< 200 mg/l
  Contenido sólidos abrasivos < 1mg/l
  Densidad ~ 1kg/dm^3
  Viscosidad ~ 1mm^2/s;

SUBMERSIBLE PUMPS
POMPE SOMMERGIBILI

CS.100

TECHNICAL DATA - DATI TECNICI

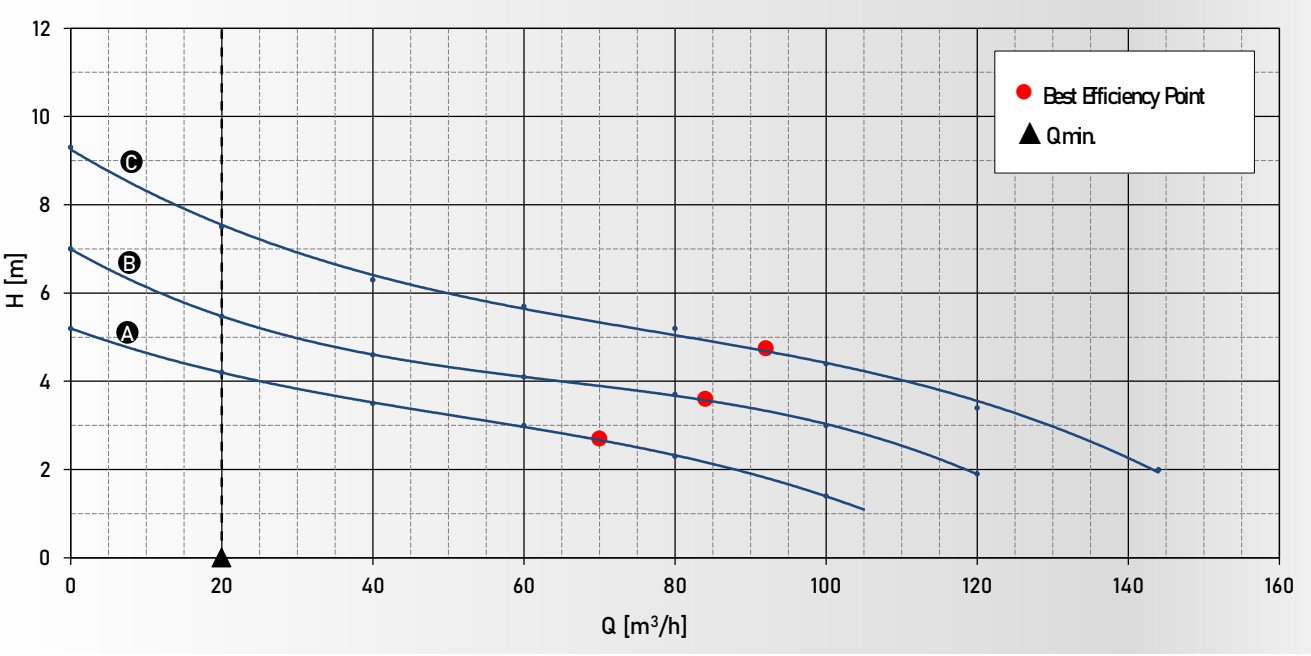
	CS.100_[GM.173]						
MODELS - MODELLI	CS.100_11.6T_[GM.173]	CS.100_15.6T_[GM.173]	CS.100_17.6T_[GM.173]	CS.100_25.4T_[GM.173]	CS.100_35.4T_[GM.173]	CS.100_45.4T_[GM.173]	CS.100_52.4T_[GM.173]
RPM/Poles - NGiri al min/Nr poli	1000 / 6	1000 / 6	1000 / 6	1500 / 4	1500 / 4	1500 / 4	1500 / 4
P2: Shaft power - Potenza all'albero [kW]	0,8	1,3	1,7	2,5	3,5	4,5	5,2
P1: Input Power - Potenza assorbita [kW]	1,6	2	2,3	3,4	4,4	5,4	6,4
Power Factor - Fattore di potenza [Cosφ]	0,70	0,72	0,75	0,80	0,84	0,83	0,84
Power supply/Freq - Alimentazione/Freq [V/Hz]	3 ~ 400 / 50	3 ~ 400 / 50	3 ~ 400 / 50	3 ~ 400 / 50	3 ~ 400 / 50	3 ~ 400 / 50	3 ~ 400 / 50
Single-phase - Monofase							
Three-phase - Triase	●	●	●	●	●	●	●
Starting - Avviamento	D.O.L.	D.O.L.	D.O.L.	D.O.L. / S.D	D.O.L. / S.D	D.O.L. / S.D.	D.O.L. / S.D.
Rated current - Corrente nominale [A]	3,3	4	4,4	6,1	7,6	9,4	11
Starting current - Corrente di spunto [A]	13,8	18,0	22,5	37,8	53,2	63,0	74,8
Free Passage - Passaggio libero Ø [mm]	80	80	80	80	80	80	80
Impeller diameter - Diametro girante [mm]							244,0
Float level switch - Galleggiante	-	-	-	-	-	-	-
Power cable type/lenght - Cavo alim. tipo/lungh. [m] Signal cable type/lenght - Cavo segn. tipo/lungh. [m]	H07RN-F 7G1,5 / 10 Power+signals - Alimentazione + segnali						
Nr. Starts per hour - Nr. Avviamenti / ora	30	30	30	25	20	20	20
Pump weight - Peso pompa [kg]	93,0	93,0	106,0	93,0	105,0	108,0	109,0

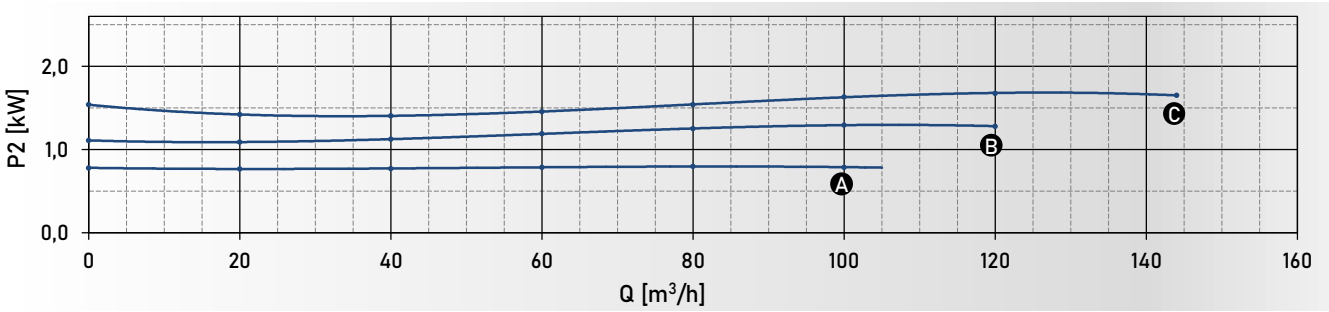
SUBMERSIBLE PUMPS
POMPE SOMMERGIBILI

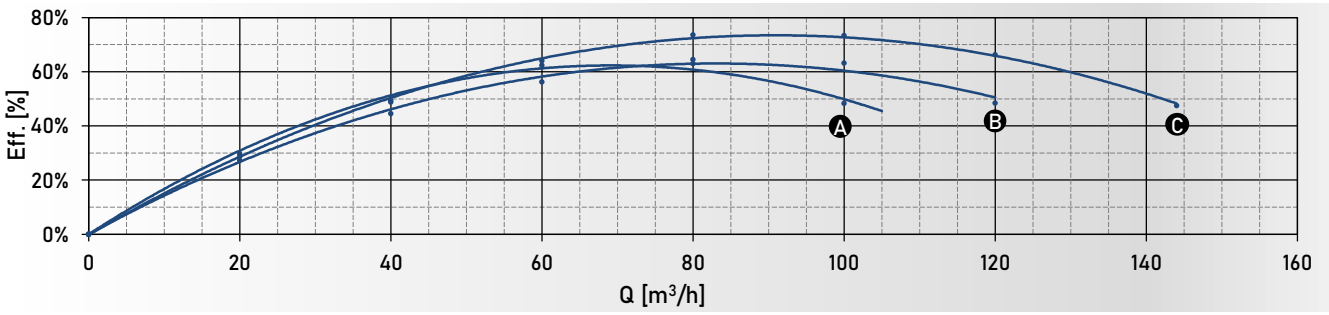
CS.100_[GM.173]

Ⓐ = CS.100_11.6T_[GM173] – 1,1 KW
Ⓑ = CS.100_15.6T_[GM173] – 1,5 KW
Ⓒ = CS.100_17.6T_[GM173] – 1,7 KW

50 Hz Three-phase motors – 6 poles – 1000 rpm







Q									
	m³/h	0	20	40	60	80	100	120	144
	L/min	0	333	667	1000	1333	1667	2000	2400
	L/s	0	5,6	11,1	16,7	22,2	27,8	33,3	40,0
Ⓐ	=CS.100_11.6T_[GM173]	5,2	4,2	3,5	3,0	2,3	1,4		
Ⓑ	=CS.100_15.6T_[GM173]	7,0	5,5	4,6	4,1	3,7	3,0	1,9	
Ⓒ	=CS.100_17.6T_[GM173]	9,3	7,5	6,3	5,7	5,2	4,4	3,4	2,0

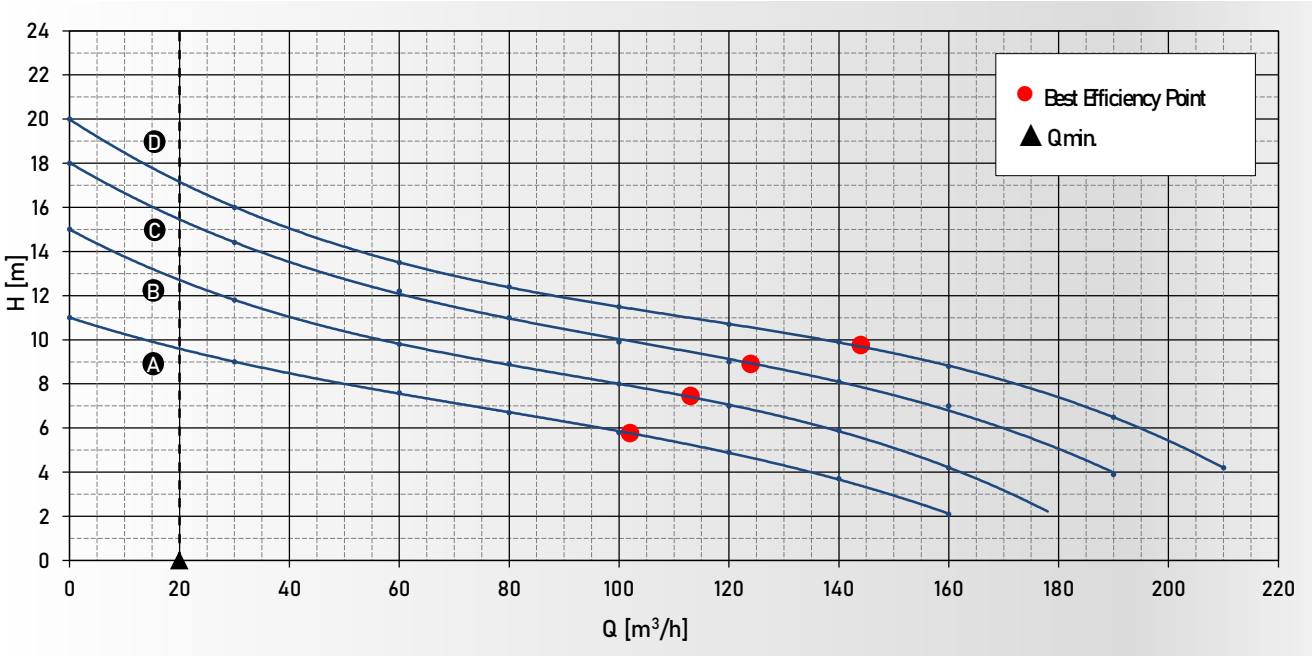
H [m]

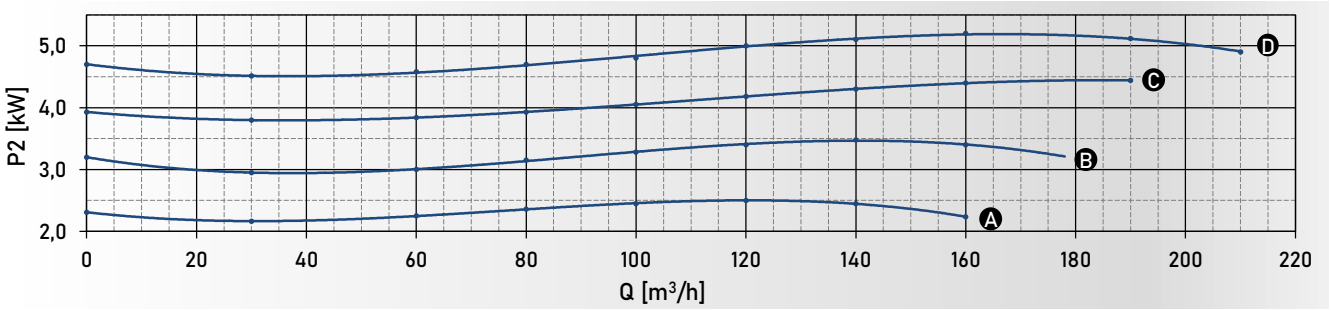
SUBMERSIBLE PUMPS
POMPE SOMMERGIBILI

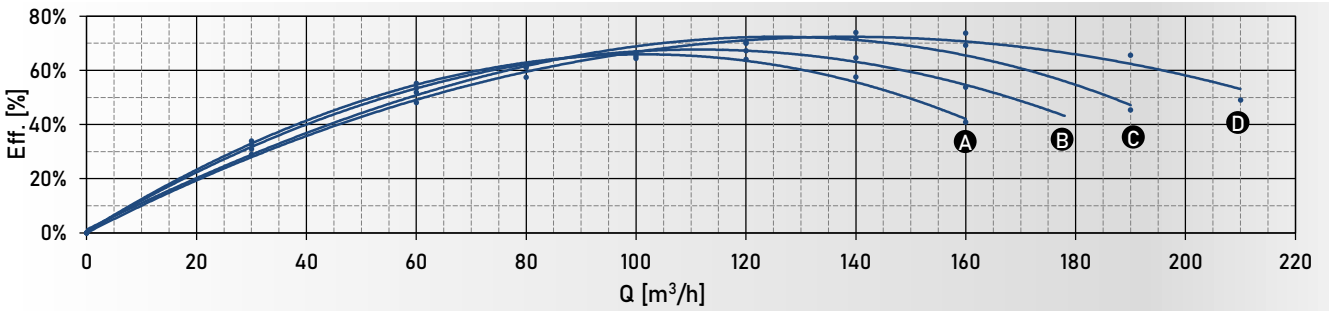
CS.100_[GM.173]

Ⓐ = CS.100_25.4T_[GM173] - 2,5 KW
Ⓑ = CS.100_35.4T_[GM173] - 3,5 KW
Ⓒ = CS.100_45.4T_[GM173] - 4,5 KW
Ⓓ = CS.100_52.4T_[GM173] - 5,2 KW

50 Hz Three-phase motors - 4 poles - 1500 rpm





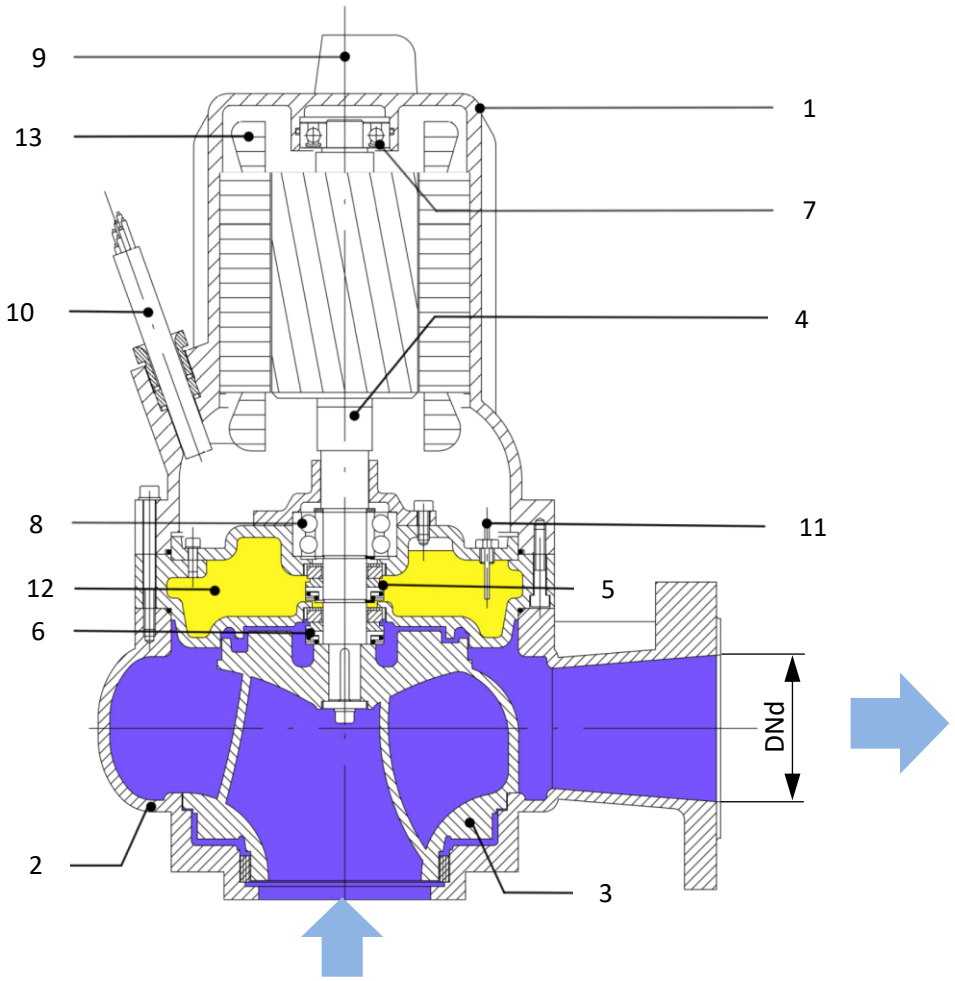


Q											
	m³/h	0	30	60	80	100	120	140	160	190	210
	L/min	0	500	1000	1333	1667	2000	2333	2667	3167	3500
	L/s	0	8,3	16,7	22,2	27,8	33,3	38,9	44,4	52,8	58,3

Ⓐ	=CS.100_25.4T_[GM173]	11,0	9,0	7,6	6,7	5,8	4,9	3,7	2,1			H [m]
Ⓑ	=CS.100_35.4T_[GM173]	15,0	11,8	9,8	8,9	8,0	7,0	5,9	4,2			
Ⓒ	=CS.100_45.4T_[GM173]	18,0	14,4	12,2	11,0	9,9	9,0	8,1	7,0	3,9		
Ⓓ	=CS.100_52.4T_[GM173]	20,0	16,0	13,5	12,4	11,5	10,7	9,9	8,8	6,5	4,2	

SECTIONAL VIEWS - VISTE IN SEZIONE

CS.100_[GM.173]



Pos.	Description	Descrizione	Material - Materiale
1	Motor body	Corpo motore	Cast Iron GG25 - Ghisa
2	Pump body	Corpo idraulico	Cast Iron GG25 - Ghisa
3	Impeller	Girante	Cast Iron GG25 - Ghisa
4	Shaft	Albero	Steel AISI 420B - Acciaio
5	Mechanical seal (motor side)	Tenuta meccanica (lato motore)	Carbon graphite / Al-Oxide - NBR
6	Mechanical seal (pump side)	Tenuta meccanica (lato pompa)	Silicon carbide / Silicon Carbide
7	Upper beraing	Cuscinetto superiore	
8	Lower bearing	Cuscinetto inferiore	
9	Handle	Grillo	Steel AISI 304 - Acciaio
10	Supply Cable	Cavo elettrico	H07RN-F [10m]
11	Oil probe (optional)	Sonda olio (optional)	
12	Oil chamber - cooling and lubrication of mechanical seal	Camera olio - raffreddamento e lubrificazione tenuta meccanica	
13	Class F stator Built in Thermal protector	Motore in Classe F Pastiglie termiche	 Bimetal - Bimetallico
DNd	Delivery outlet	Bocca di mandata	Ø100 mm - PN10-PN16
	Screw quality grade	Grado di qualità delle viti	A2

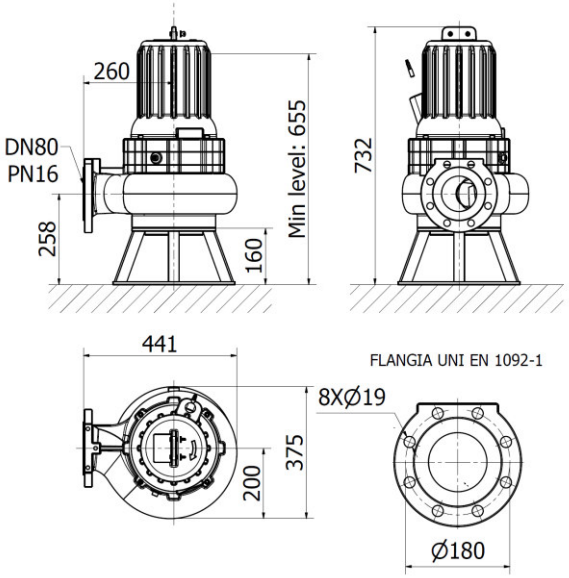
SUBMERSIBLE PUMPS
POMPE SOMMERGIBILI

CS.100

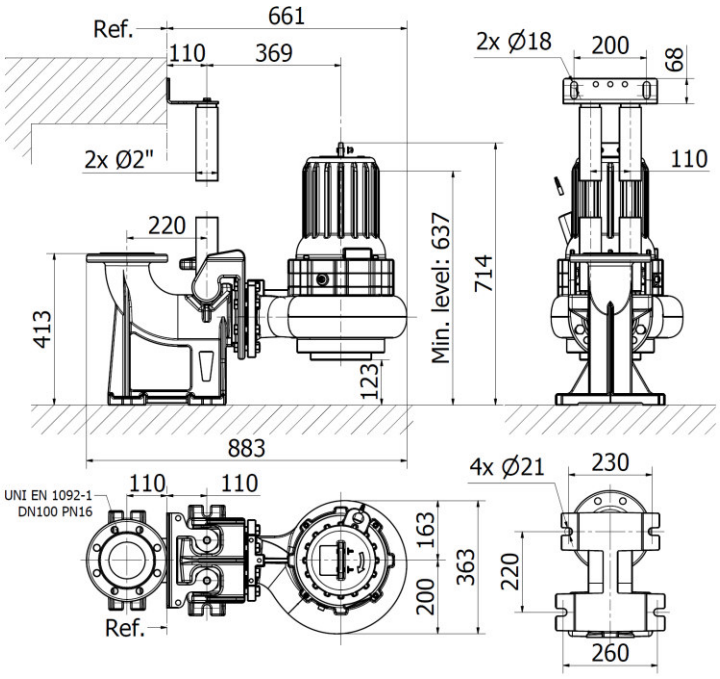
OVERALL DIMENSIONS - DIMENSIONI D'INGOMBRO

CS.100_[GM.173]

S



FC



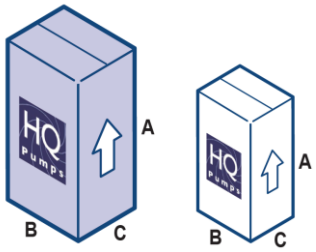
INSTALLATION MODES - MODALITA' D'INSTALLAZIONE

S =Transportable underwater - Trasportabile in immersione

FC =Fixed with coupling dvice - Fissa con dispositivo di accoppiamento

PACKAGING DIMENSIONS - DIMENSIONI IMBALLAGGIO mm

	A	B	C
Pump CS.100_[GM.173] - Pompa	750	450	390
Foot coupling - Piede di accoppiamento	550	600	400



Dimensions and technical data are indicative, not binding and subjected to possible modifications without notice.
Dimensioni e dati tecnici sono indicativi, non vincolanti e soggetti a eventuali modifiche senza preavviso.

ACCESSORIES - ACCESSORI



FBV - art. 4BV00008

Flanged DN 100 PN 16 - Flangiata



SHELL - art. 3CS000021

Counterweight for level switch
Contrappeso per galleggiante



HF - art. 3CS000007

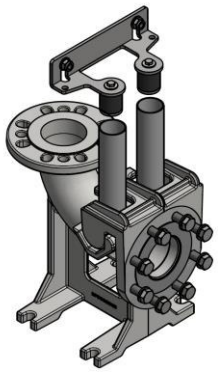
Level switch for sewage (10 m el. cable)
Regolatore di livello per acque reflue (cavo el. 10 m)



INT 69F - art. 2EC000040

Protection Relay for temperature and leakage monitoring

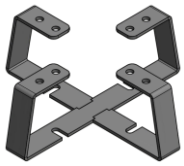
Relè di protezione per il monitoraggio della temperatura e delle perdite



FC - art. 8FC000006

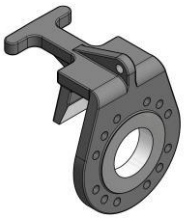
DN 100 PN 16 Coupling device with:
- Sliding Bracket + screws + gaskets
- Upper rail guide support

Dispositivo di accoppiamento DN100 PN16 compreso di:
- Slitta + viti + guarnizioni
- Supporto superiore per tubi guida



FC - art. 8FC000007

Galvanized steel support stand
Cavalletto di sostegno in ferro zincato



AT 100 - art. 2SB000007

Adapter for competitors foot coupling device
Adattatore per dispositivo di accoppiamento di terze parti



ECL



ECH

CS.100_[GM.173]		P_2 [kW]	In [A]	Avv. Start.	ECH - ELECTROMECHANICAL ELETTROMECCANICO 1 Pump ECH1.T-7 5EC000005	ECH - ELECTROMECHANICAL ELETTROMECCANICO 1 Pump ECH1.T 7-14 5EC000007	ECH - ELECTROMECHANICAL ELETTROMECCANICO 2 Pumps ECH2.T-7 5EC000029	ECH - ELECTROMECHANICAL ELETTROMECCANICO 2 Pumps ECH2.T 7-14 5EC000031	ECL - ELECTRONIC ELETTRONICO 1 Pump ECL1.T-15 5EC000083	ECL - ELECTRONIC ELETTRONICO 2 Pumps ECH2.T-15 5EC000084
CS.100_11.6T_[GM.173]	- 6 poles	1,1	3,0	DOL	▪		▪		▪	▪
CS.100_15.6T_[GM.173]	- 6 poles	1,5	4,0	DOL	▪		▪		▪	▪
CS.100_17.6T_[GM.173]	- 6 poles	1,7	4,4	DOL	▪		▪		▪	▪
CS.100_25.4T_[GM.173]	- 4 poles	2,5	6,1	DOL	▪		▪		▪	▪
CS.100_35.4T_[GM.173]	- 4 poles	3,5	7,6	DOL		▪		▪	▪	▪
CS.100_45.4T_[GM.173]	- 4 poles	4,5	9,4	DOL		▪		▪	▪	▪
CS.100_52.4T_[GM.173]	- 4 poles	5,2	11,0	DOL		▪		▪	▪	▪